AMENDMENTS TO THE SPECIFICATION

IN THE SPECIFICATION:

Please amend the paragraph on page 10, lines 4-10 as follows:

One of the advantages of freeze ~~concenntration~~ concentration is that it can be used to concentrate volatile and semi-volatile substances in aqueous solutions. In this example, two phenols (phenol and 3-chloro-phenol, at the concentration of 5 µg/ml each) were concentrated by the device of the present invention. The conditions used were the same as those in the example 1. Fig. 5A shows the electropherogram of the samples before concentration. Fig. 5B shows the electropherogram obtained after applying the freeze concentration process of the present invention. It can be seen that nearly 8 times concentration was obtained.

Please amend the paragraph on page 10, lines 12-28 as follows:

Many biological molecules, such as proteins and RNA, could be damaged during high temperature or organic solvents treatments. Freeze concentration can be a good choice for concentrating such thermally labile and chemically sensitive biological molecules because it doesn't involve any high temperature or organic solvents. This example demonstrates concentrating two proteins (Lysozyme and Trypsin, at the concentration of 12.5 µg/mL and 17.5

μg/mL, respectively) using the device of the present invention. First the concentration of the protein solution by the conditions in the examples 1 and 2 was tested. Small concentration efficiency (about 1.5 times) was obtained. The reason may be due to the low diffusion coefficient of the proteins. The growth rate of the ice in the above conditions was significantly faster and may be larger than the diffusion rate of the proteins. Therefore, much of the protein molecules were included into the ice lattice. As such, the growth rate of the ice during freeze concentration was lowered. After using a slush bath (prepared by mixing ~~ethanlene~~ ethylene glycol with dry ice) with a temperature -15°C as the thermostat 11, nearly 100% recovery for both proteins was obtained. Fig. 6A shows the electropherogram of the samples before concentration. Fig. 6B shows the electropherogram obtained after applying the freeze concentration process of the present invention. It can be seen that nearly 12 times concentration was obtained.